

pure. proven. perfect.

**Creapure**<sup>®</sup>

# Power to perform

Creatine – the body's own dietary supplement.

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## Sport means never being satisfied with the minimum. Always striving for the best.



Sport means performance. Going to the limits, redefining them, surpassing them, and doing it again. So what's needed? Commitment, perseverance, the right training – and proper nutrition to help sportspeople get their personal best from their bodies.

Creatine, which occurs naturally in the body, plays a crucial role here. Essential to the supply of energy within cells, creatine is proven as a highly efficient dietary supplement which boosts sporting performance. The controlled intake of supplementary creatine can improve sprinting performance, for example, and reduce recovery time after intense training.



First used in sport at the highest levels (including many Olympic athletes), creatine has now made the leap from professional athletes to a very wide circle of users.

Where is creatine used? In all disciplines that call for repeated bursts of maximum power: track and field, swimming, weightlifting, skiing, tennis, team sports such as football, ice hockey and handball, and many more.



# Improving performance is human nature.

## The key lies within the body.

Creatine belongs naturally in the body, where it plays a central role in storing, transporting and buffering energy within every cell. Adults have around 80-130g of creatine in their bodies. Every day about 1-2% of this creatine is broken down and excreted, so it has to be replenished.

Some creatine can be synthesized in various organs of the body, and some comes from our diet. Active sportspeople can get useful amounts of dietary creatine from meat and fish, but not from dairy products or vegetables. In addition to the creatine obtained from a balanced diet, the amount of creatine stored in the body can be boosted by taking creatine supplements.

Short periods of intense sporting activity, such as sprinting, require energy faster than it can be produced spontaneously in muscle. The body therefore calls on its reserves of energy in the form of ATP and creatine.

### Creatine in food

Food	Creatine content
Meat and poultry	approx. 3-7g/kg
Fish	approx. 3-7g/kg
Milk und dairy products	approx. 0.1 g/kg
Fruit and vegetables	Traces

Source: in-house analyses



A phosphate group splits off from each molecule of ATP, releasing energy to power the muscle and leaving behind a molecule of ADP. However, the muscle contains only enough ATP for a few seconds of high-energy activity. The body later converts ADP back into ATP using the energy we get from our food, but this takes time.

So to allow the muscle to keep working at full power the body needs a way to regenerate ATP quickly. This is where creatine comes into play. In resting muscle, creatine is present mostly in the form of phosphocreatine, which contains an additional phosphate group. Before the hard-working muscle runs out of ATP, an enzyme known as creatine kinase transfers this phosphate group to ADP, converting it back to ATP. When the body is resting, creatine is converted back into phosphocreatine.

The regeneration of ADP to ATP using phosphate supplied by phosphocreatine can only take place for as long as sufficient stores of phosphocreatine are available within the muscle cells. With this in mind, building up creatine reserves by taking extra creatine is not just sensible, it's recommended.

For optimum supply of creatine an adult would have to consume approximately 500g per day of raw meat or fish. Cooking breaks down a proportion of the original creatine in raw food.

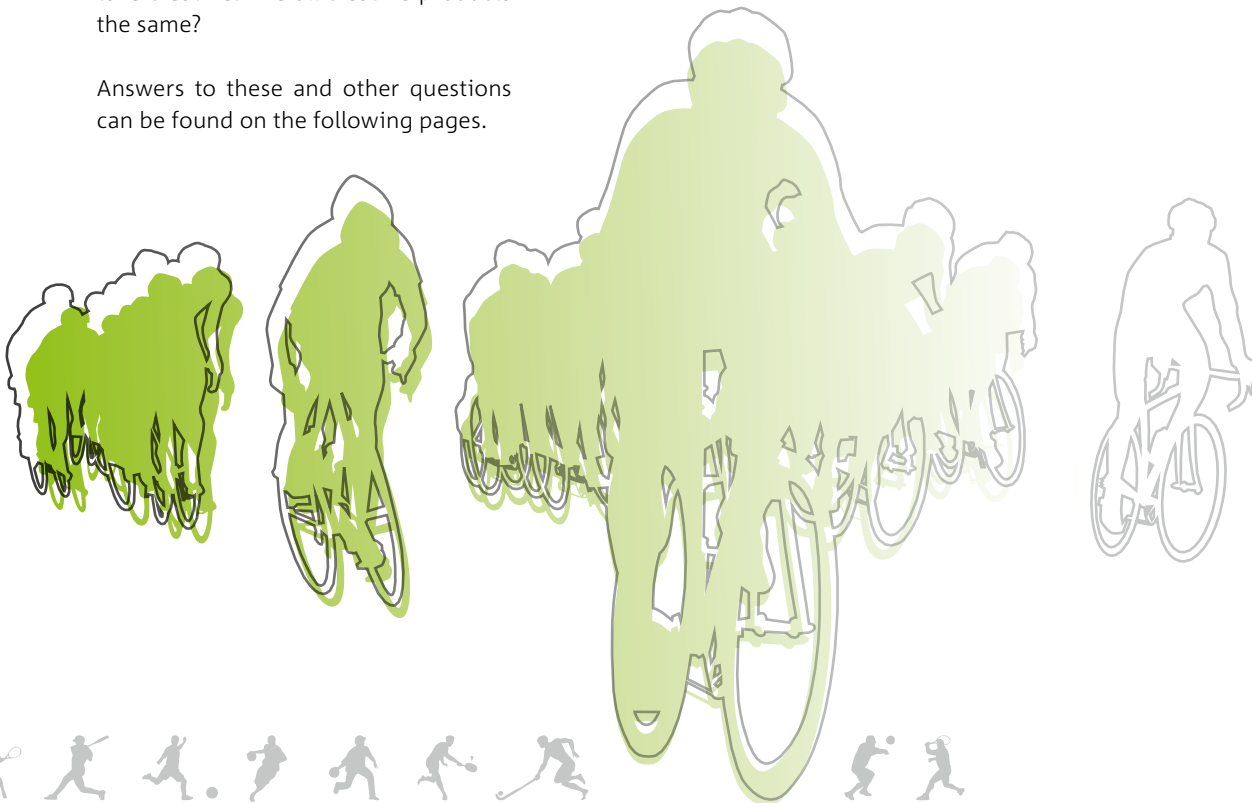


# More than a dietary supplement: the perfect training partner.



Creatine in sport – how exactly does the body benefit? And are the benefits really proven? What is the right way to take creatine? Are all creatine products the same?

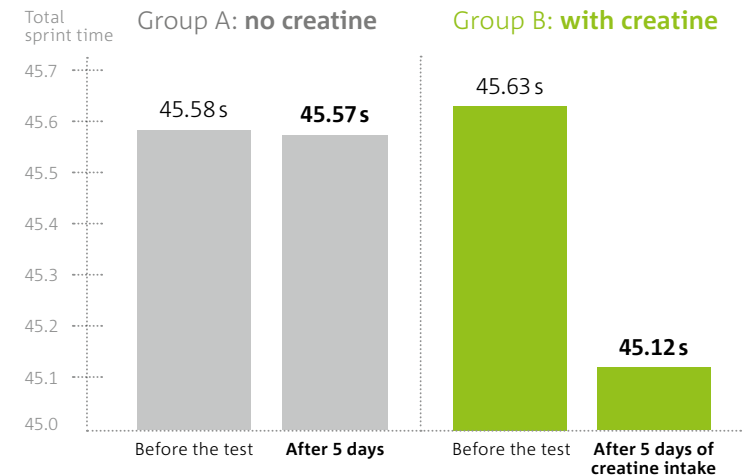
Answers to these and other questions can be found on the following pages.



The positive effects of creatine in sport have been documented in hundreds of publications.

The »International Society of Sports Nutrition« describes creatine as the most effective ergogenic dietary supplement currently available and confirms that it produces a scientifically proven increase in maximum muscle power and muscle performance<sup>1</sup>. Athletes taking creatine can achieve higher power outputs and improve the quality of their workouts throughout their training programs. Creatine lets them train harder for longer, with shorter recovery times. This promotes muscle development and an increase in lean body mass.

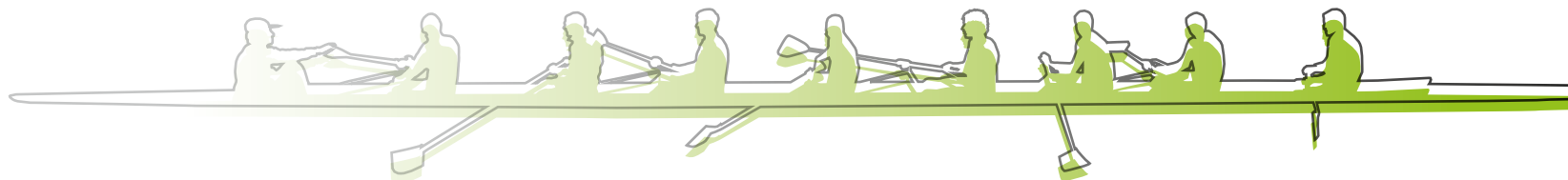
## Improved performance for six consecutive 60 m sprints<sup>2</sup>



Sources: <sup>1</sup>Buford et al. (2007); Journal of the International Society of Sports Nutrition, 4(6)  
<sup>2</sup>Skare et al. (2001); Scandinavian Journal of Medicine & Science in Sports, 11(2)



## Sport needs doers. Not doubters.



### Effects not side-effects

Extensive studies have shown that creatine monohydrate has an excellent safety profile. Both short-term and long-term consumption of creatine are scientifically proven to have no adverse side-effects, provided the creatine is pure and taken at the right dosage; just a slight weight gain may be noticed. This assessment matches that of the European Food Safety Authority (EFSA), which has said that a long-term dose of 3 g/day is unlikely to pose any risk to adults<sup>1</sup>. US experts recommend a daily dose of 5 g.

### What, when and how to take creatine

Creatine works best when combined with regular training. We recommend a daily dose of 3-5 g, taken if possible at the same time each day and with plenty of liquid such as water, tea or juice. Creatine is usually taken shortly before or after training in the form of a drink prepared from powder. Because it breaks down only very slowly when dissolved in liquid, creatine drinks can be prepared before a training session and taken afterwards.

Sportspeople may take creatine all year round, whether they are training, competing, or resting. When creatine is used at the recommended dose there is no need to periodically stop taking it.

### Fiction versus facts

The few myths concerning creatine are easy to refute. For example, some people say that creatine is broken down by acid in the stomach, or that it is not absorbed well by the intestines and is mostly excreted unused. In reality, more than 95% of the creatine monohydrate swallowed is successfully absorbed into the bloodstream. Another myth concerns the alleged harmfulness of creatinine, the natural degradation product of creatine. The fact is that any possible increase in the amount of creatinine in the blood due to creatine supplements has no adverse effects on the body. Some of these myths are particularly associated with other forms of creatine; creatine in the form of pure creatine monohydrate is the gold standard.

### And what about doping?

Creatine has nothing to do with doping and is not on the list of banned substances published by the World Anti-Doping Agency (WADA).

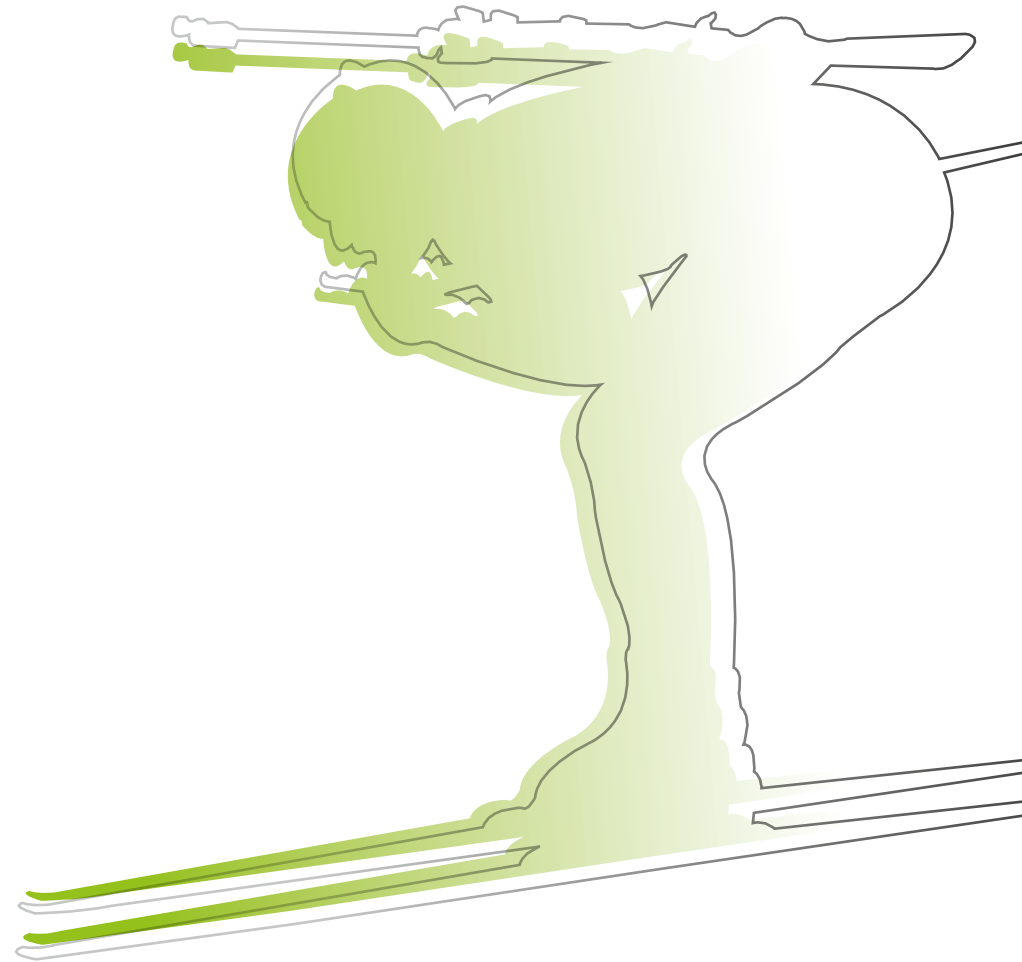


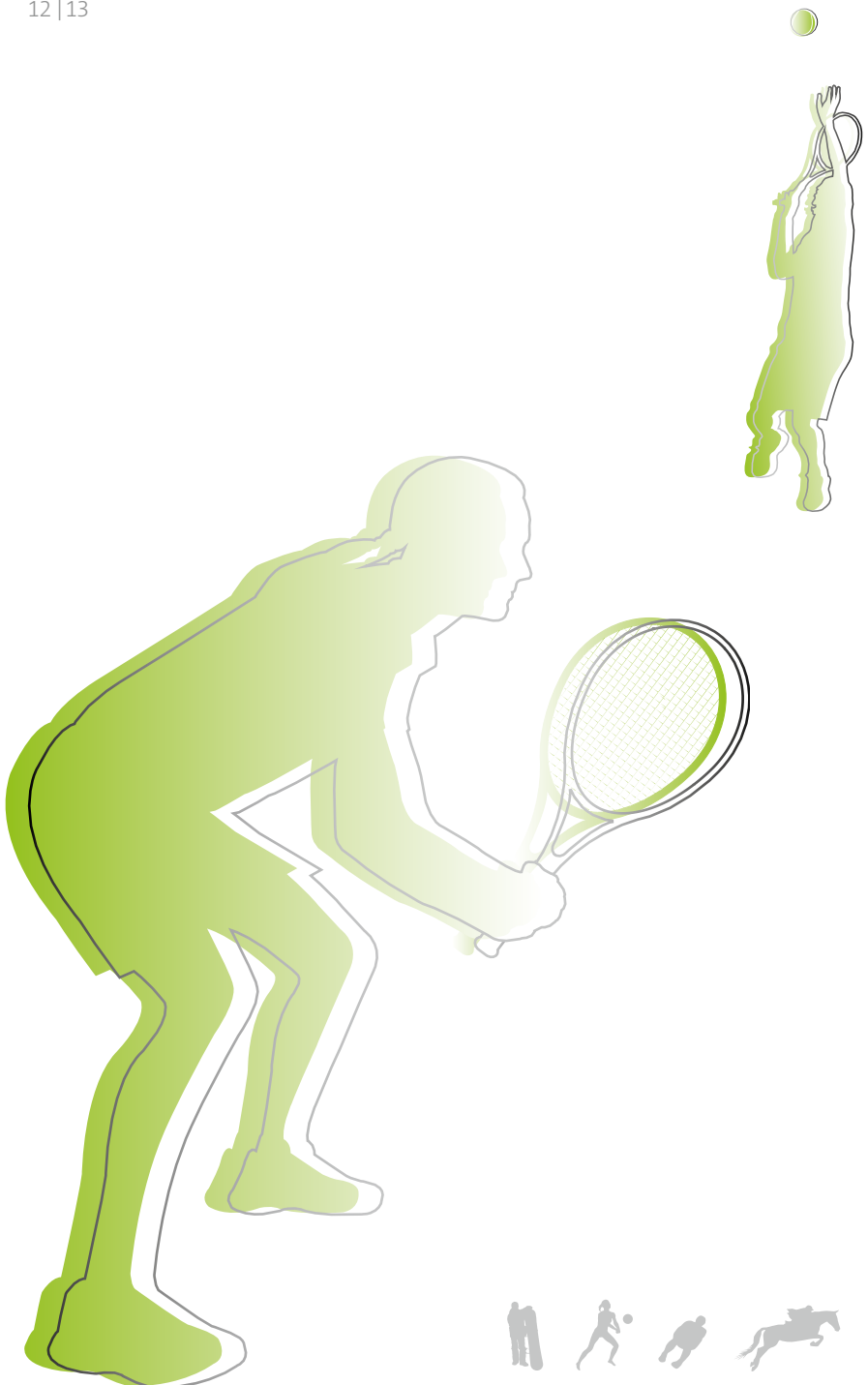
For everyone   
 who shares the goal:  
 peak performance.

»As a biathlete I have to rely 100%  
 on my performance.  
 That's why I have to be 100%  
 confident in all my training choices.

One of those choices is   
 to use pure creatine from Creapure®.«

Andi Birnbacher, world-class biathlete





## Quality doesn't happen by chance. It's a question of competence.

Not all creatine is the same. Its effectiveness is certainly important, but so too is its purity. There are huge differences in manufacturing processes and above all in quality. That's why leading scientists and athletes recommend creatine from AlzChem AG.

The company uses its own proven, reliable process to manufacture high-purity creatine at a purpose-built production facility in Germany. Together with regular internal and external quality controls, including full analysis of every batch, this process ensures optimum quality.

Creatine monohydrate from AlzChem is marketed under the Creapure® brand to well-known manufacturers of sports nutrition products worldwide. If there's no Creapure® logo on the manufacturer's packaging, ask whether their product contains Creapure® – the best quality German creatine from a traceable source.



## The best basis for trust: an objective viewpoint.



»Every manufacturer should unconditionally guarantee the certified production and documented purity of its creatine.

In particular, it is essential to be sure that the concentrations of any possibly toxic byproducts which may be formed during the creatine synthesis are below the statutory maximum levels in the finished product.

But unfortunately this is not always the case. The market is full of contaminated preparations that may pose a health risk. That is why as a scientist I can recommend only one creatine monohydrate without reservation: Creapure® from AlzChem.

This creatine produced in Trostberg, Germany, meets all the necessary quality standards, including full certification to the highest levels.«

Dr. Theo Wallimann  
Prof. Emeritus, ETH Zürich, Switzerland



### Creapure® production uses HACCP

Hazard Analysis and Critical Control Points (HACCP) is a management system which is widely used to identify, assess and control health risks in food production.



### Creapure® is on the Cologne List®

The Cologne List® is a list of nutritional supplements which have been tested for banned substances. By using only products on the Cologne List® athletes reduce the risk of unintentionally becoming the victims of doping. Every product bearing the Cologne List® logo must be analyzed regularly for anabolic-androgenic steroids and stimulants at the Center for Preventive Doping Research of the German Sport University in Cologne. Approved products also require a satisfactory assessment of contamination risks carried out by the manufacturer. Creapure® meets all these requirements.



### Creapure® is kosher certified

Kosher refers to foods and food preparation methods which satisfy the requirements of Jewish dietary law. Creapure® is certified to meet these regulations.



### Creapure® is halal certified

In the context of food, halal indicates products which may be eaten by Muslims because they satisfy Islamic dietary regulations. Creapure® is produced in compliance with these regulations.

For more information on Creapure® go to [www.creapure.com](http://www.creapure.com)

